

Claim Amendments

Please amend the claims as follows. This listing of claims will replace all prior versions and listing of claims in the application.

1. (Currently Amended) A system for obtaining video of a moving fixation point within a scene, comprising:

- a control unit;
- a plurality of non-moving image capturing devices positioned to substantially surround around the scene, wherein the scene is within a field of view of each image capturing device;
- a plurality of image generators, wherein each image generator is in communication with one of the image capturing devices, and wherein a first of the image generators is responsive to a command from the control unit, and wherein the plurality of image generators are each for generating image frames based on one or more images captured by their associated image capturing device; and
- a surround-view image sequence generator in communication with each of the image generators and responsive to the command from the control unit for generating a surround-view video sequence of the fixation point based on output from certain of the image generators, wherein the surround-view video sequence comprises a sequence of image frames, wherein each image frame in the sequence is from one the plurality of image generators and wherein an order of images in the sequence of image frames corresponds to a spatial order of the image capturing devices around the scene ~~the image frames are sequenced based on a placement of the image capturing devices around the scene,~~ and wherein the surround-view image sequence generator is for determining a

viewing angle parameter and a zoom parameter for each of the image generators except the first image generator based on a command from the control unit such that the fixation point is in the image frame generated by each of the image generators and such that the size of a point of interest at the fixation point is the same for each image generator, and wherein the image generators other than the first image generator are configured to generate the image frame based on the one or more images captured from the image generators' associated image capturing devices based on the viewing angle parameter and the zoom parameter received from the surround-view image sequence generator.

2. (Original) The system of claim 1, further comprising an inter-image capturing device calibration database in communication with the surround-view image sequence generator.

3. (Original) The system of claim 1, wherein the first image generator is responsive to a viewing angle command and a zoom command from the control unit.

4. (Canceled).

5. (Previously Presented) The system of claim 1, wherein the surround-view image sequence generator includes:

a mapping module for outputting a command to each of the image generators other than the first image generator based on the command from the control unit; and an image sequencing module in communication with each of the image generators for outputting the image from certain of the image generators in sequence according to the position of the image generators around the scene.

6. (Previously Presented) The system of claim 5, further comprising an inter-image capturing device calibration database in communication with the mapping module.

7. (Original) The system of claim 1, wherein each of the image capturing devices includes a camera bank including a plurality of non-moving cameras.

8. (Original) The system of claim 7, wherein at least one of the image generators is in communication with an intra-bank calibration database.

9. (Original) The system of claim 1, wherein each of the image capturing devices includes a non-moving panoramic wide field of view camera.

10. (Original) The system of claim 1, wherein each of the image capturing devices is selected from the group consisting of a non-moving panoramic wide field of view camera and a camera bank having a plurality of non-moving cameras.

11. (Original) The system of claim 1, wherein the image capturing devices are periodically positioned around the scene.

12. (Original) The system of claim 1, further comprising:
a moving camera having a field of view within the scene; and
an additional image generator in communication with the moving camera and in communication with the surround-view image sequence generator, wherein the additional image generator is responsive to a second command based on the command from the control unit.

13. (Original) The system of claim 12, wherein the moving camera includes a pan/tilt camera.

14. (Original) The system of claim 1, further comprising a computer vision module in communication with the control unit.

15. (Original) The system of claim 1, wherein the computer vision module is further for selecting a second image generator to be responsive to the command from the control unit.

16. (Original) The system of claim 1, further comprising a second control unit, wherein one of the image generators is responsive to a command from the second control unit, and wherein the surround-view image sequence generator

is further for generating a second surround-view video sequence of a second fixation point within the scene based on output from certain of the image generators and the command from the second control unit.

17. (Original) The system of claim 16, wherein the first image generator is responsive to the command from the second control unit.

18. (Currently Amended) A system for obtaining video of a moving fixation point within a scene, comprising:
a control unit;
a plurality of non-moving image capturing devices positioned to substantially surround ~~around~~ the scene, wherein the scene is within a field of view of each image capturing device;
a plurality of image generators, wherein each image generator is in communication with one of the image capturing devices, and wherein a first of the image generators is responsive to a viewing angle command and a zoom command from the control unit, and wherein the plurality of image generators are each for generating image frames based on one or more images captured by their associated image capturing devices;
a computer-based mapping module for outputting a viewing angle command and a zoom command to each of the image generators other than the first image generator based on the viewing angle command and the zoom command from the control unit such that the fixation point is in the image frame generated by each of the image generators and such that the size of a point of interest at the

fixation point is the same for each image generator, wherein the image generators other than the first image generator are configured to generate the image frame based on the one or more images captured from the image generators' associated image capturing devices based on the viewing angle command and the zoom command received from the mapping module; and an a computer-based image sequencing module in communication with each of the image generators for outputting an image frame of the fixation point from certain of the image generators in sequence, wherein an order of images in the sequence of image frames corresponds to a spatial order of the according to the position of the image generators' associated image capturing devices around the scene.

19. (Original) The system of claim 18, further comprising an inter-image capturing device calibration database in communication with the mapping module.

20. (Original) The system of claim 19, wherein each of the image capturing devices is selected from the group consisting of a non-moving panoramic wide field of view camera and a camera bank having a plurality of non-moving cameras.

21. (Original) The system of claim 20, wherein the image capturing devices are periodically positioned around the scene.

22. (Original) The system of claim 20, further comprising a computer vision module in communication with the control unit.

23. (Original) The system of claim 18, further comprising a second control unit, and wherein:
one of the image generators is responsive to a viewing angle command and a zoom command from the second control unit;
the mapping module is further for outputting a second viewing angle command and a second zoom command to each of the image generators other than the image generator responsive to the second control unit based on the viewing angle command and the zoom command from the second control unit; and
the image sequencing module is further for outputting an image of a second fixation point within the scene from certain of the image generators in sequence according to the position of the image generators around the scene.

24. (Original) The system of claim 23, wherein the first image generator is responsive to the viewing angle command and zoom command from the second control unit.

25. (Original) The system of claim 18, further comprising:
a moving camera having a field of view within the scene; and
an additional image generator in communication with the moving camera and in communication with the mapping module and the image sequence generator.

26. (Original) The system of claim 25, wherein the moving camera includes a pan/tilt camera.

27. (Currently Amended) A system for obtaining video of a moving fixation point within a scene, comprising:
a plurality of non-moving image capturing devices positioned to substantially surround around the scene, wherein the scene is within a field of view of each image capturing device;
a plurality of image generators, wherein each image generator is in communication with one of the image capturing devices, and wherein the plurality of image generators are each for generating image frames based on one or more images captured by their associated image capturing device;
means for controlling a viewing angle and zoom parameter for each of the image generators such that the moving fixation point is in the image frame generated by each of the image generators and such that the size of a point of interest at the fixation point is the same for each image generator; and
means for generating a surround-view video sequence of the fixation point based on output from certain of the image generators, wherein the surround-view video sequence comprises a sequence of image frames, wherein each image frame in the sequence is from one the plurality of image generators and wherein an order of images in the sequence of image frames corresponds to a spatial order of the image capturing devices around the scene ~~the image frames are sequenced based on a placement of the image capturing devices around the scene.~~

28. (Original) The system of claim 27, wherein each of the image capturing devices is selected from the group consisting of a non-moving panoramic wide field of view camera and a camera bank having a plurality of non-moving cameras.

29. (Original) The system of claim 27, wherein the image capturing devices are periodically positioned around the scene.

30. (Original) The system of claim 27, further comprising means for generating commands for the viewing angle and the zoom parameter.

31. (Original) The system of claim 27, further comprising:
a moving camera having a field of view within the scene; and
an additional image generator in communication with the moving camera, wherein
the means for controlling the viewing angle and zoom parameter for each of the
image generators is further for controlling a viewing angle and zoom parameter
for the additional image generator, and wherein the means for generating a
surround-view video sequence of the fixation point is further for generating the
surround-view video sequence additionally based on output from the additional
image generator.

32. (Original) The system of claim 31, wherein the moving camera includes a pan/tilt camera.

33. (Currently Amended) A method for obtaining video of a moving fixation point within a scene, comprising:
capturing a first plurality of images of the fixation point with a plurality of non-moving image capturing devices positioned to substantially surround around the scene, wherein the scene is within a field of view of each image capturing device;
generating a viewing angle command and a zoom command for each image capturing device; and
generating a second plurality of images, wherein each image of the second plurality of images corresponds to an image that a virtual camera located at a position of each of the image capturing devices would capture based on the first plurality of images, the viewing angle command for each image capturing device, and the zoom parameter for each image capturing device such that the moving fixation point is in each of the second plurality of images and such that the size of a point of interest at the fixation point is the same in each of the second plurality of images.

34. (Original) The method of claim 33, further comprising outputting the second plurality of images in sequence according to the position of the image capturing devices around the scene.

35. (Original) The method of claim 33, further comprising:

generating a second viewing angle command and a second zoom command for each image capturing device; and
generating a third plurality of images, wherein each image of the third plurality of images corresponds to an image that a virtual camera located at a position of each of the image capturing devices would capture based on the first plurality of images, the second viewing angle command for each image capturing device, and the second zoom parameter for each image capturing device.

36. (Original) The method of claim 35, further comprising:
outputting the second plurality of images in sequence according to the position of the image capturing devices around the scene; and
outputting the third plurality of images in sequence according to the position of the image capturing devices around the scene.

37. (Currently Amended) A system for obtaining video of a moving fixation point within a scene, comprising:
a control unit;
a plurality of non-moving image capturing devices positioned to substantially surround ~~around~~ the scene, wherein the scene is within a field of view of each image capturing device;
a plurality of image generators, wherein:
each image generator is in communication and associated with one of the image capturing devices;

wherein at least a first image generator of the plurality of image generators is responsive to at least one viewing command from the control unit; and wherein each of the image generators is programmed to generate images that correspond to images that a virtual camera located at a position of the associated image capturing device would capture based on the at least one viewing command; and

a surround-view image sequence generator in communication with each of the image generators and responsive to the at least one viewing command from the control unit for generating a surround-view video sequence of the fixation point based on output from at least two of the image generators wherein the surround-view video sequence comprises a sequence of images generated by the image generators, wherein each generated image in the sequence is from one the plurality of image generators and the generated images wherein an order of images in the sequence of image frames corresponds to a spatial order of the image capturing devices around the scene ~~are sequenced based on a placement of the image capturing devices around the scene~~, and wherein the surround-view image sequence generator is for determining a viewing angle parameter and a zoom parameter for each of the image generators other than the first image generator based on the command from the control unit such that the fixation point is in the image generated by each of the image generators and such that the size of a point of interest at the fixation point is the same for each image generator, wherein the image generators other than the first image generator are configured to generate the images based on the one or more images captured from the image generators' associated image

capturing devices based on the viewing angle parameter and the zoom parameter received from the surround-view image sequence generator.

38. (Previously Presented) The system of claim 37, wherein the surround-view image sequence generator includes:
a mapping module for outputting commands to each of the image generators other than the first image generator based on the at least one viewing command from the control unit; and
an image sequencing module in communication with each of the image generators for outputting the image from the at least two image generators in sequence according to the position of the at least two image generators around the scene.

39. (Previously Presented) The system of claim 38, further comprising an inter-image capturing device calibration database in communication with the mapping module.

40. (Previously Presented) The system of claim 37, wherein the image generators are programmed to generate the images that correspond to images that a virtual camera located at the position of the associated image capturing device would capture by using panoramic mosaicing.

41. (Previously Presented) The system of claim 39, wherein the image generators are programmed to generate the images that correspond to images that

a virtual camera located at the position of the associated image capturing device would capture by using panoramic mosaicing.

42. (Previously Presented) The system of claim 37, wherein the at least one viewing command comprises a viewing angle command and a zoom parameter command.